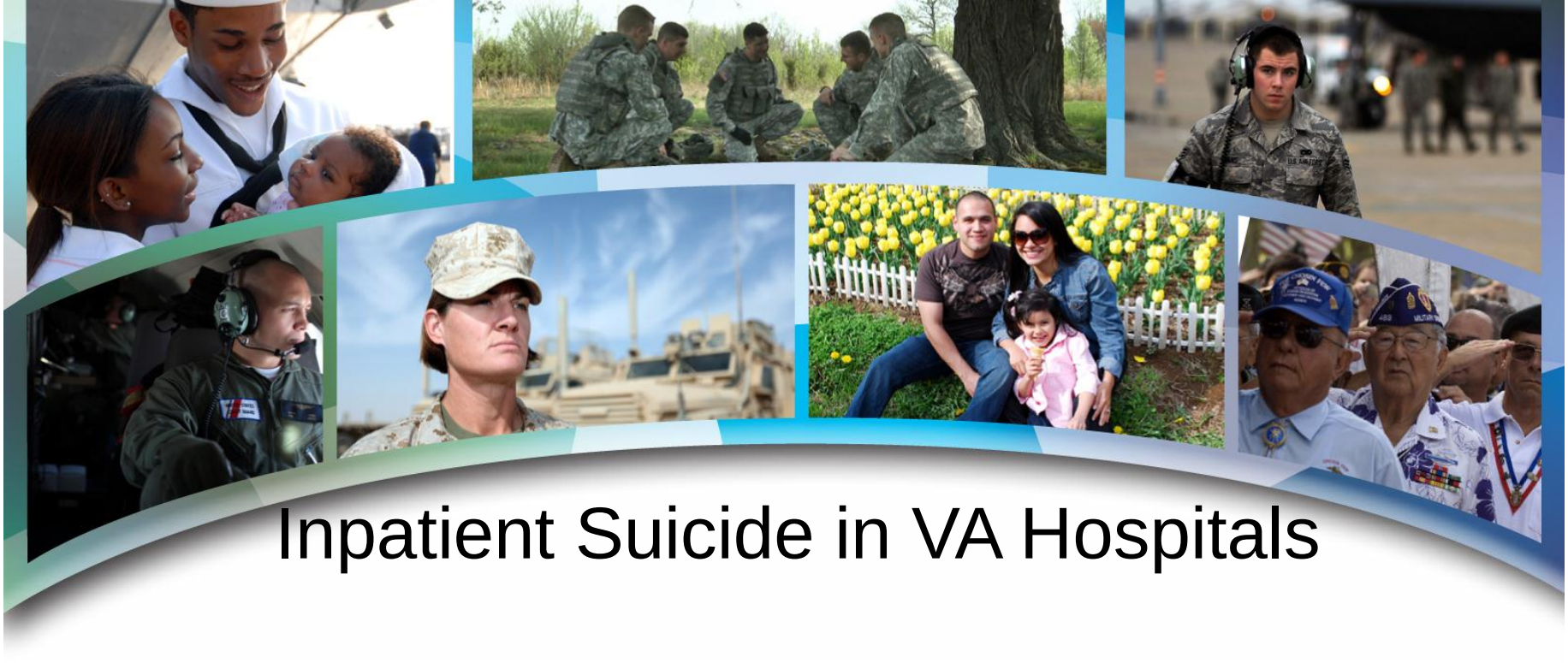

Inpatient Suicide in VA Hospitals

Review of Root Cause Analysis Reports and the Development and Deployment of a Checklist to Reduce Inpatient Suicide

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JUNE 2012

NCPS VA National Center for Patient Safety

Veterans Health Administration Employee Education System

Agenda for this talk

- Suicide: The challenge
- Root Cause Analysis and NCPS
- Inpatient Suicide attempts and completions in mental health units
- Suicide attempts and completions in the ED, Acute Care, Domiciliaries and Nursing Homes
- Mental Health Environment of Care Checklist.
- More information about inpatient suicide

The Challenge

Suicide is the tenth leading cause of death in the United States taking the lives of over 33000 people each year. In 2007, 165,997 individuals were hospitalized for self-inflicted injuries, and in 2007, 395,320 people were treated in emergency department for self-harm

Primary risk factors are

- Suicidal thoughts/behaviors and history of these behaviors.
- Psychiatric diagnoses (Depression, Bipolar, Sub Abuse).
- Physical illnesses (pain and functional impairment).
- Availability of lethal means such as medications or fire-arms.
- Feelings of hopelessness, impulsivity, aggression, anxiety.
- Elderly white males at high risk (especially when alone).
- One third of those who die by suicide were positive for alcohol
- There is one completed suicide for every 25 attempts

Suicide Among Veterans

30,000-32,000 US deaths from suicide per year in US - About 20% are Veterans.

18 deaths from suicide per day are Veterans.

5 deaths from suicide per day: Veterans in VHA.

950 attempts per month: Veterans in VHA

11% of those who attempted suicide in FY2009 made a repeat suicide attempt ~ 6% died.

Veterans as a group do not have a higher rate of suicide, but There is evidence of *a 21% excess of suicides through 2007 among OEF/OIF Veterans when their mortality was compared to that of the US general population, with adjustment for age, sex, race, and calendar year.*

– *VA Office of Environmental Epidemiology*

Inpatient Suicide

- 1500 inpatient suicides per year in the U.S.
- Inpatient suicide rates estimated to be 5-80 per 100,000 psychiatric admissions in U.S.
- Second most common JC sentinel event
- Physical environment a root cause in 84% of JC sentinel event inpatient suicides.
- Hanging is the most common method reported in JC (75%) literature and in the VA (30.4%).
- 50% of suicide by hanging were NOT fully suspended – using anchor points below the head.

VA National Center for Patient Safety

Study Systems in order to improve patient safety in VA since 1999.

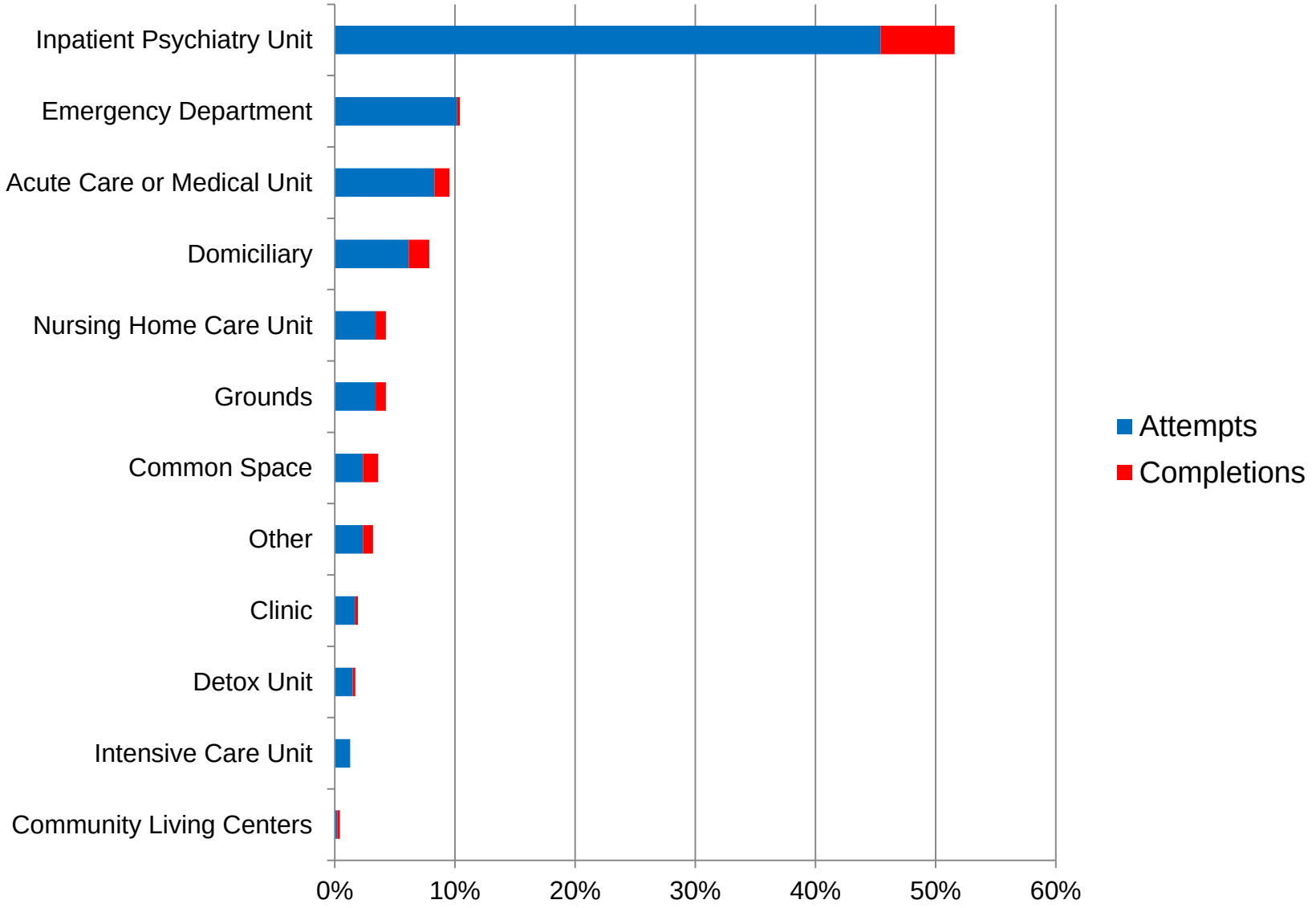
Root Cause Analysis (RCA) one tool used

- RCA: Mandated by JC since 1997
- RCA s focus on the systemic and organizational factors that may have contributed to an adverse event - not patient characteristics
- Produces a detailed narrative report of what happened, why it happened and how to prevent it from happening again

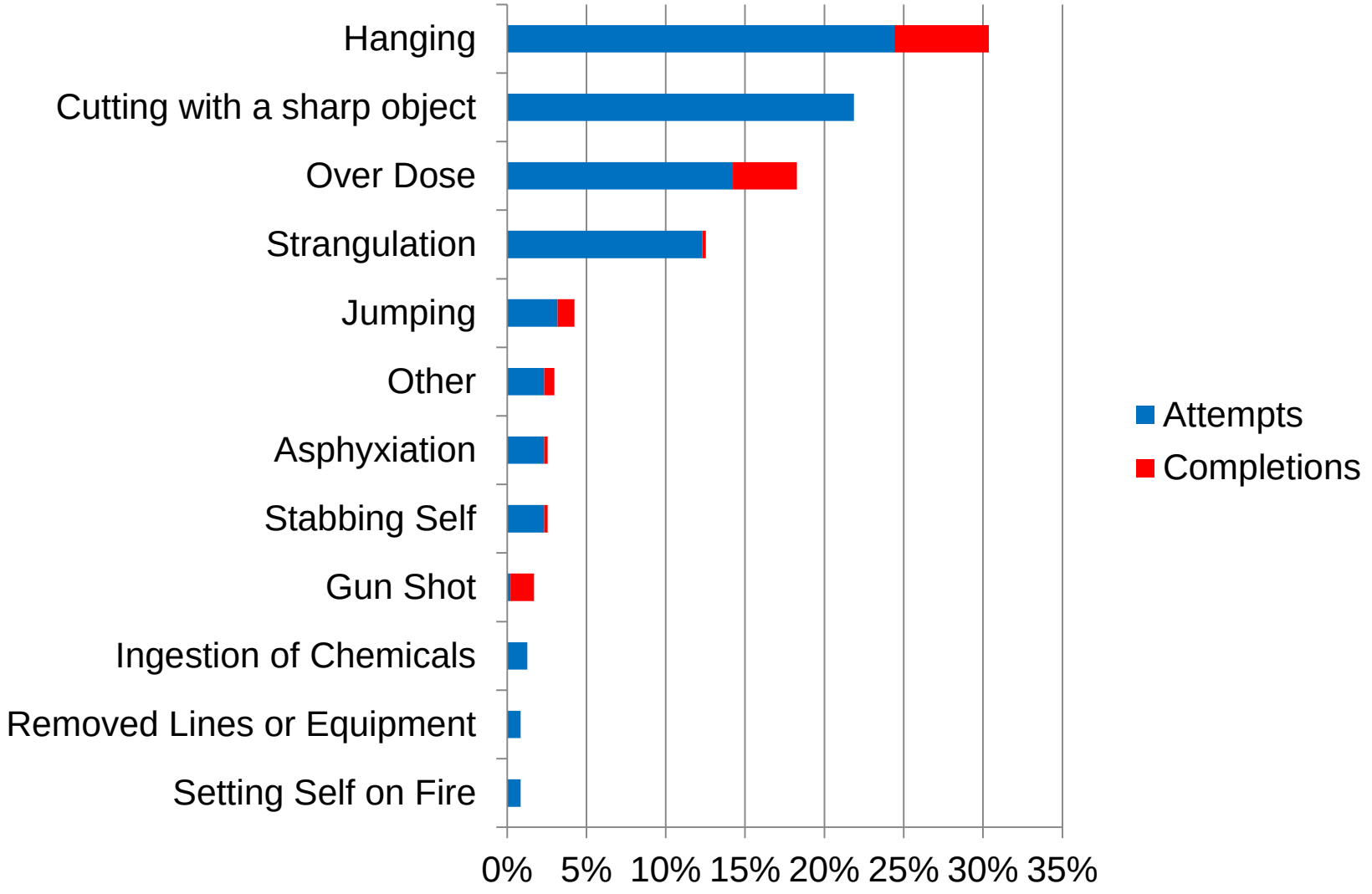
Update on Inpatient Suicide

- Reviewed all RCA reports of suicide, suicide attempts or “para-suicide” on any inpatient unit from December 1999 to December 2011
- Coded the reports for location, method, hanging anchor points and type of lanyard used as well as the “Root Causes”
- Found 447 RCA reports including 65 reports of completed inpatient suicide.

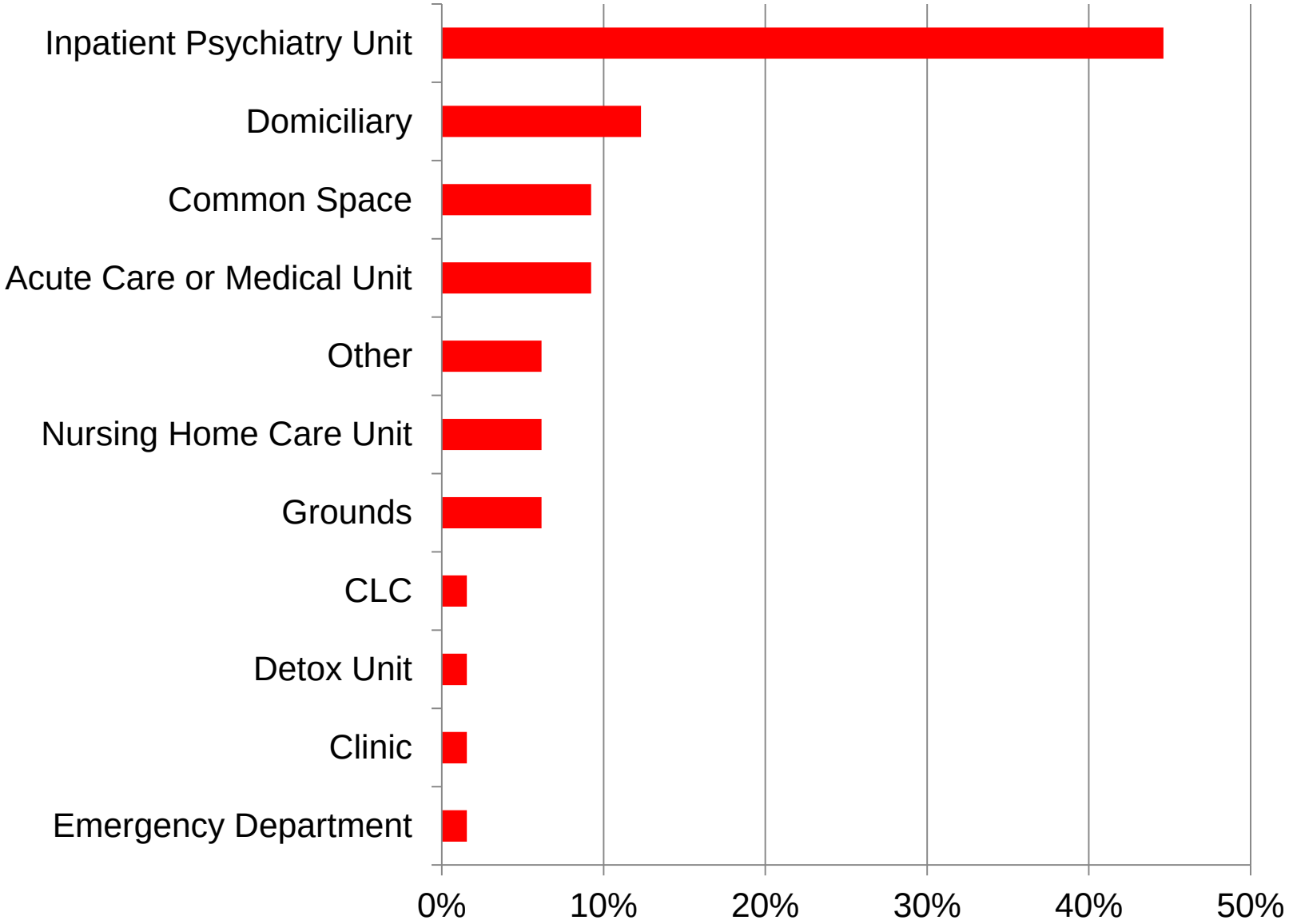
Location of RCA reports of Inpatient Suicide Attempts and Completions through 2011 (N=471)



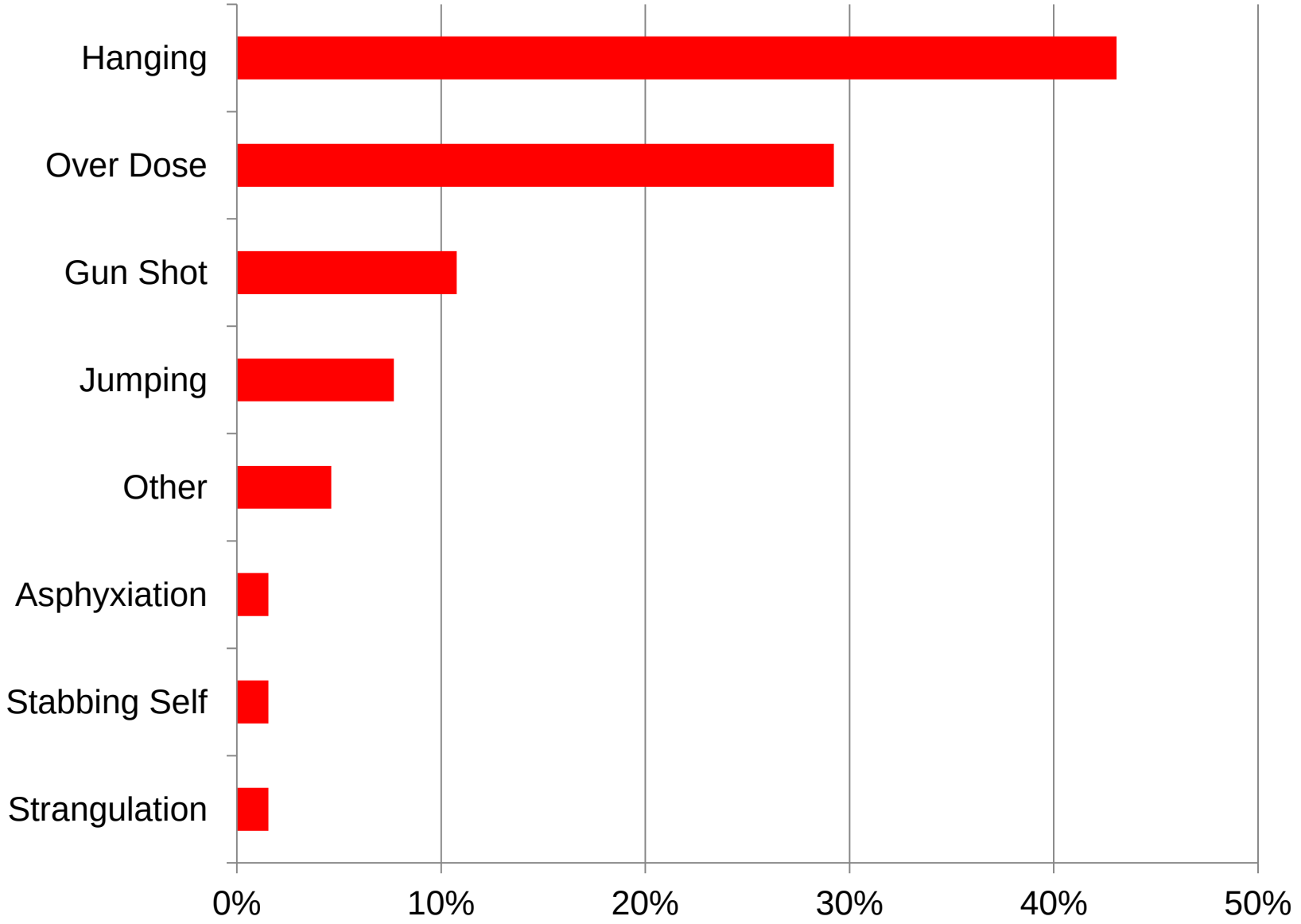
Method of RCA reports of Inpatient Suicide Attempts and Completions Through 2011 (N = 471)



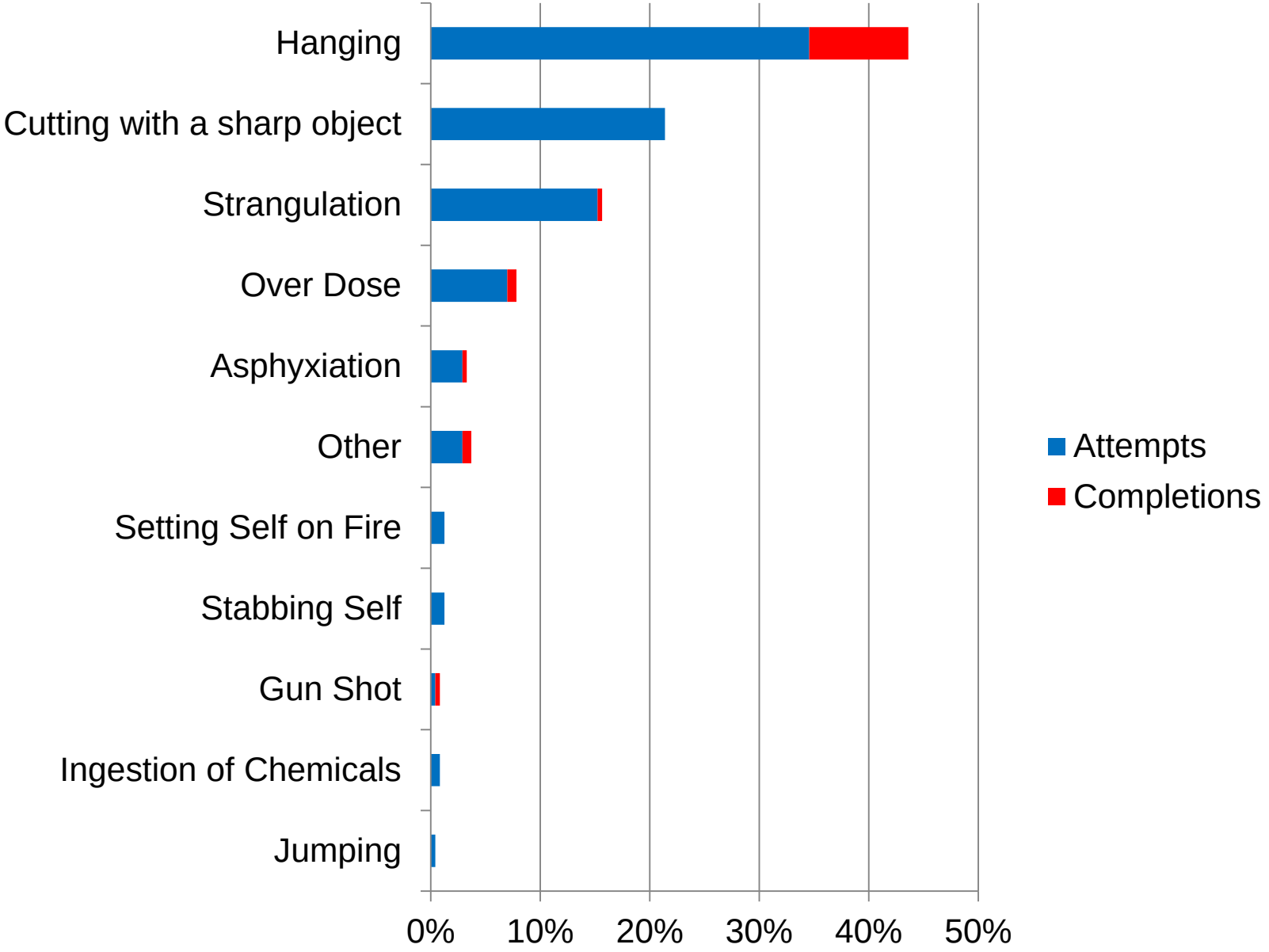
Location of RCA reports of completed inpatient suicides through 2011 (N = 65)



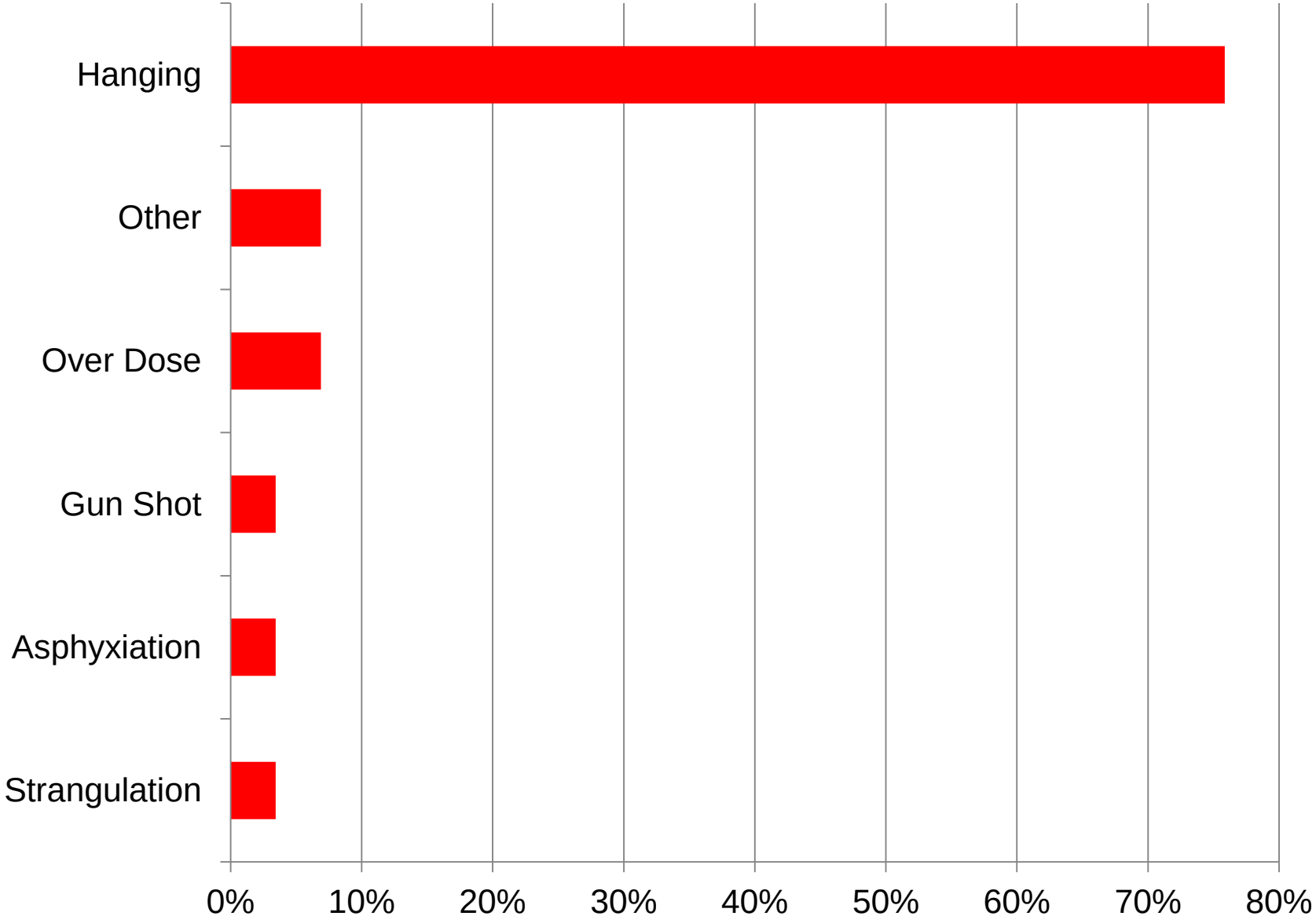
Method of completed inpatient suicide on all units through 2011 (N=65)



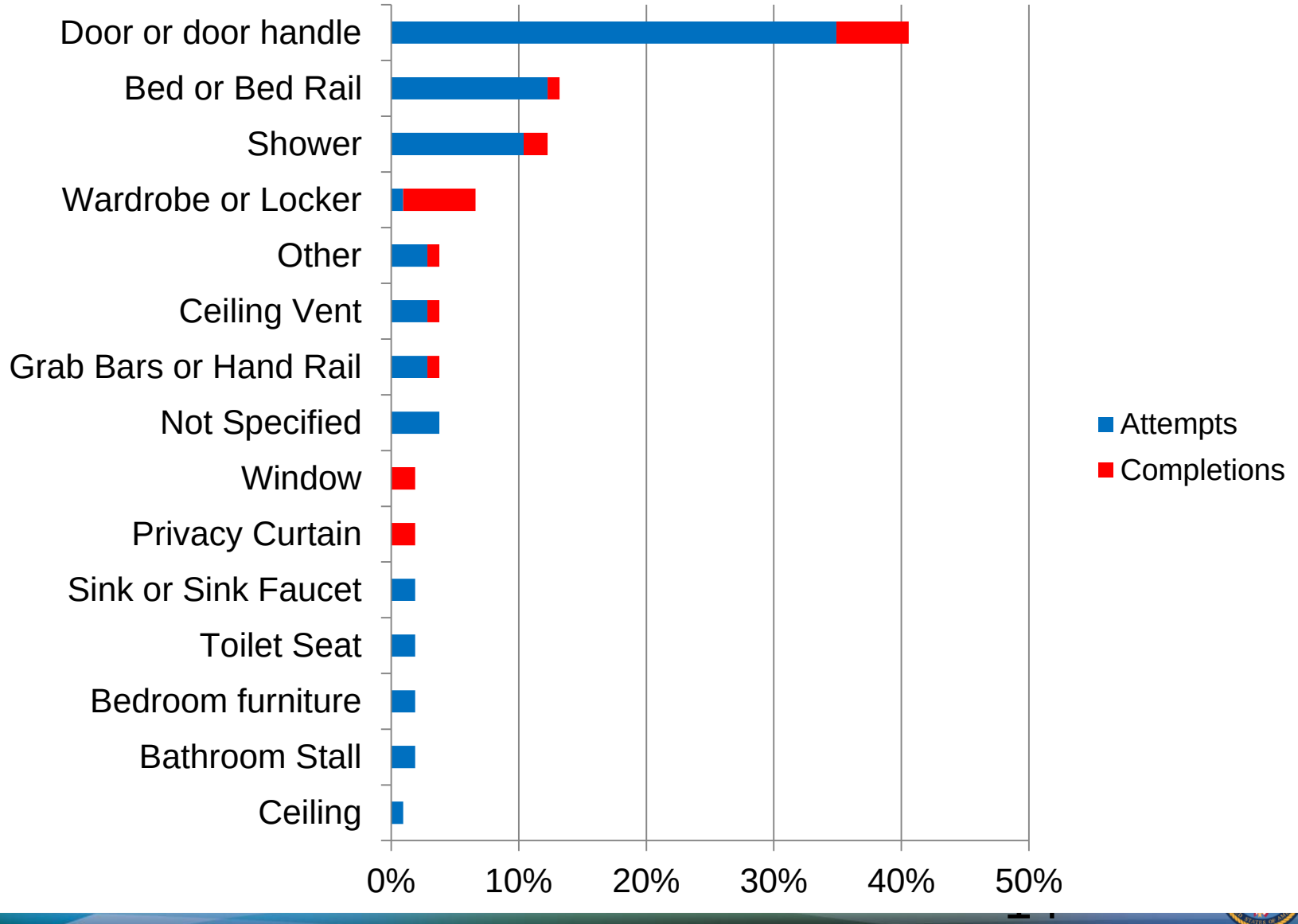
Method of inpatient suicide attempts and completions on mental health units through 2011 (N=243)



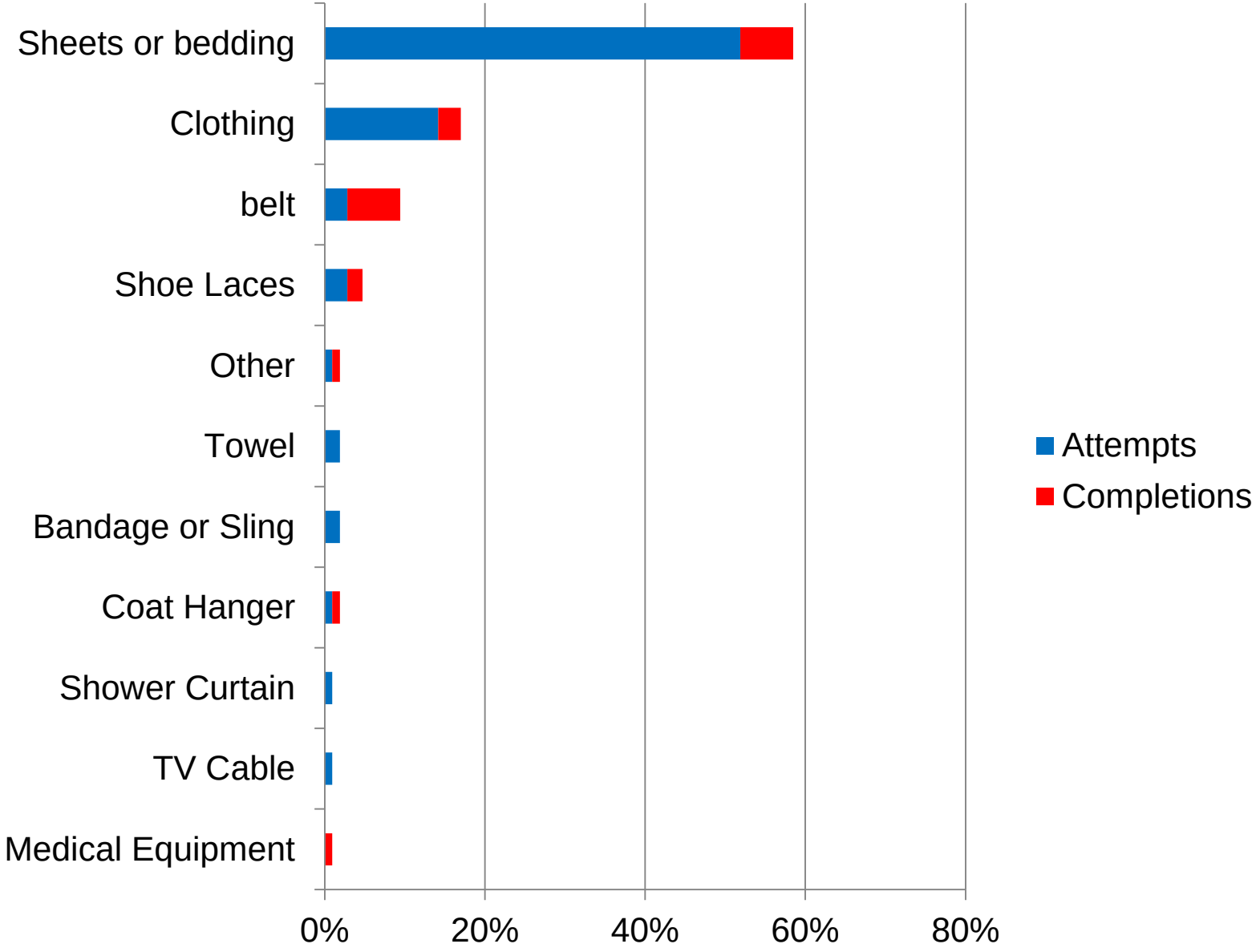
Method of completed inpatient suicide on mental health units through 2011 (N=29)



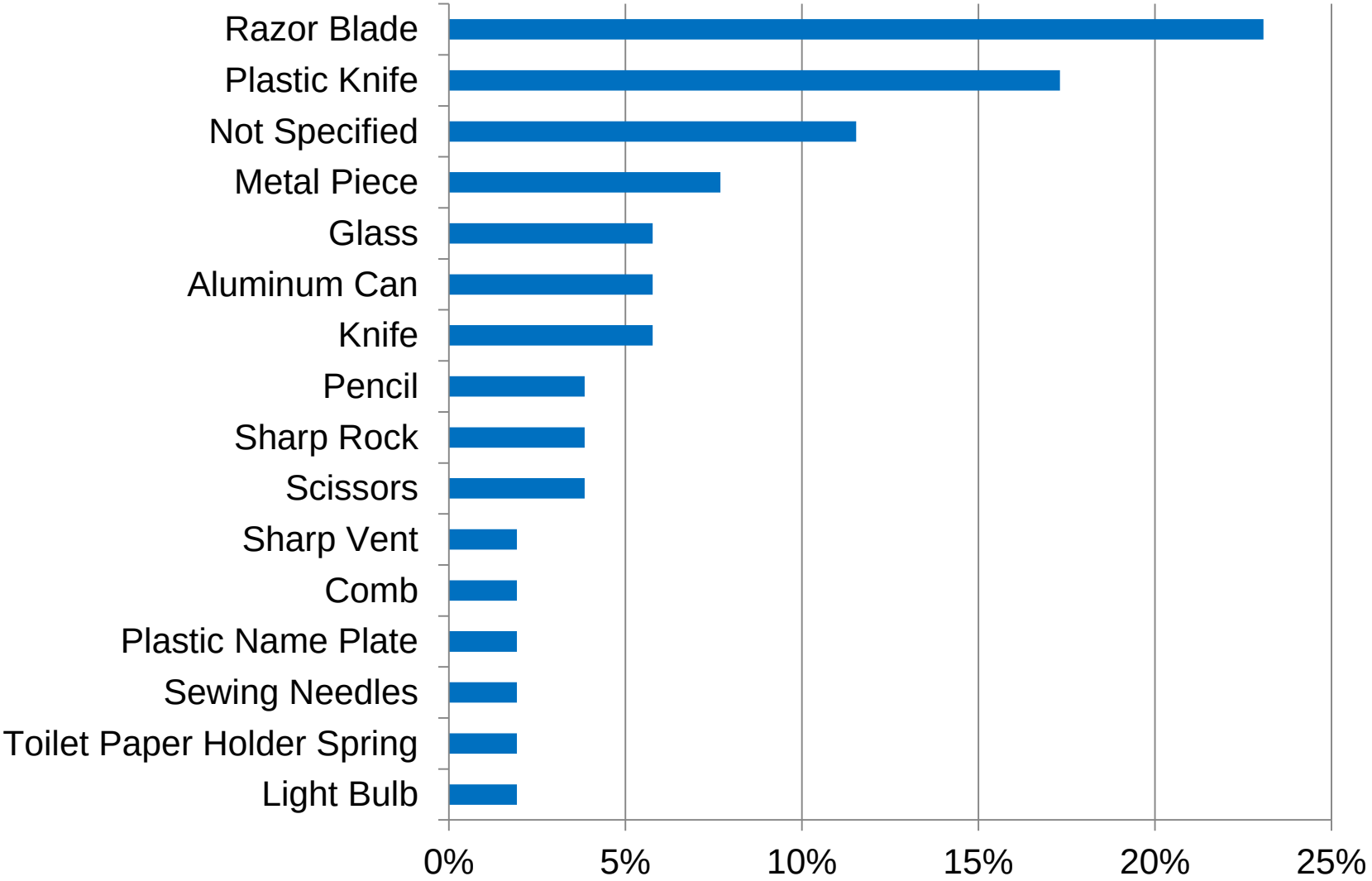
Anchor Points used for hanging in mental health units through 2011 (N=106)



Lanyards used for hanging in mental health units through 2011 (N=106)

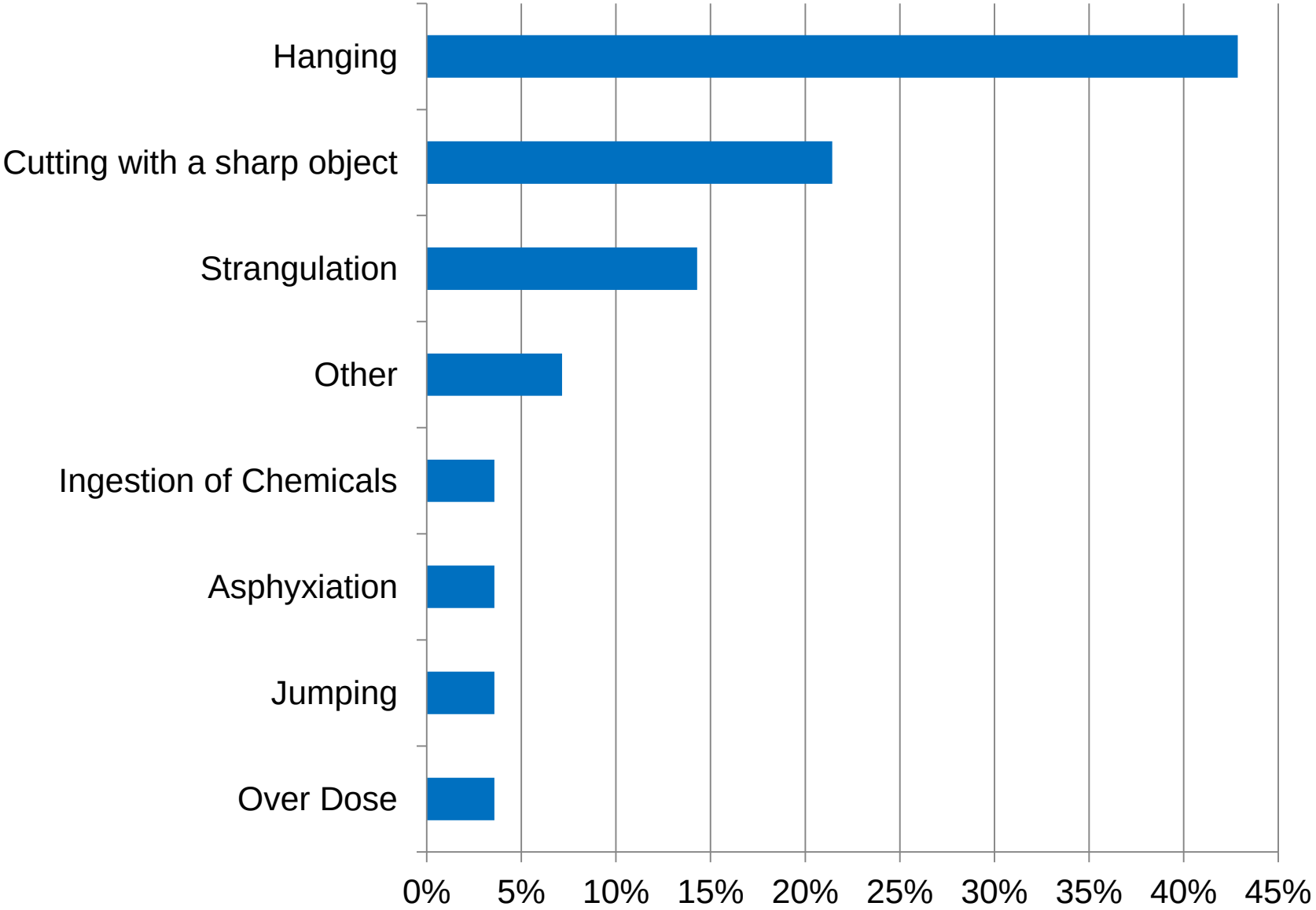


Method of cutting on mental health units through 2011 (N=52)
There were no completed suicides

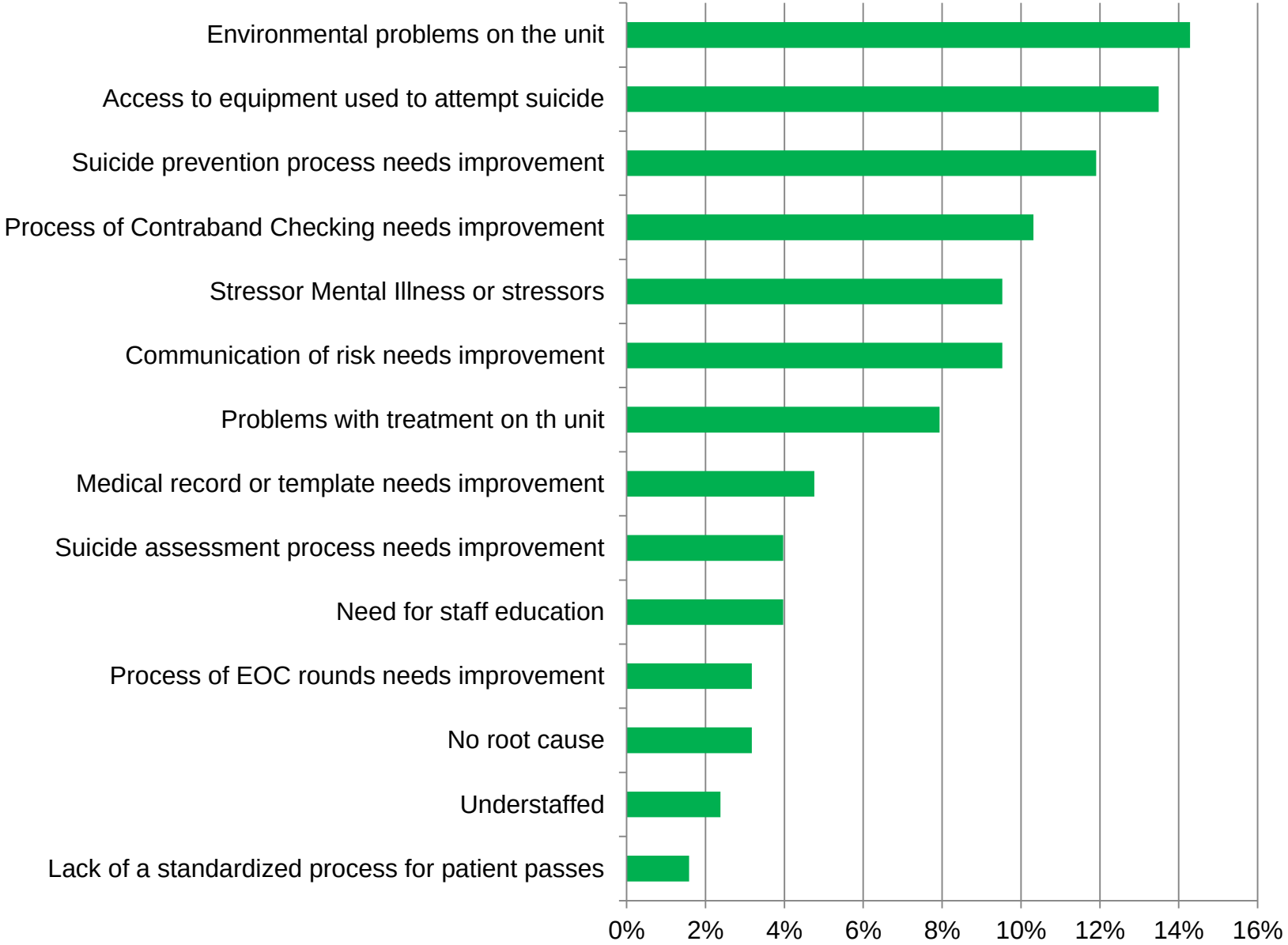


Method of suicide attempts on inpatient mental health units in 2011 (N=28)

Note: no completed suicides in 2011



Root Causes for inpatient suicide attempts and completions on mental health units 2010-2011 (57 Cases 126 “root causes”)



New products

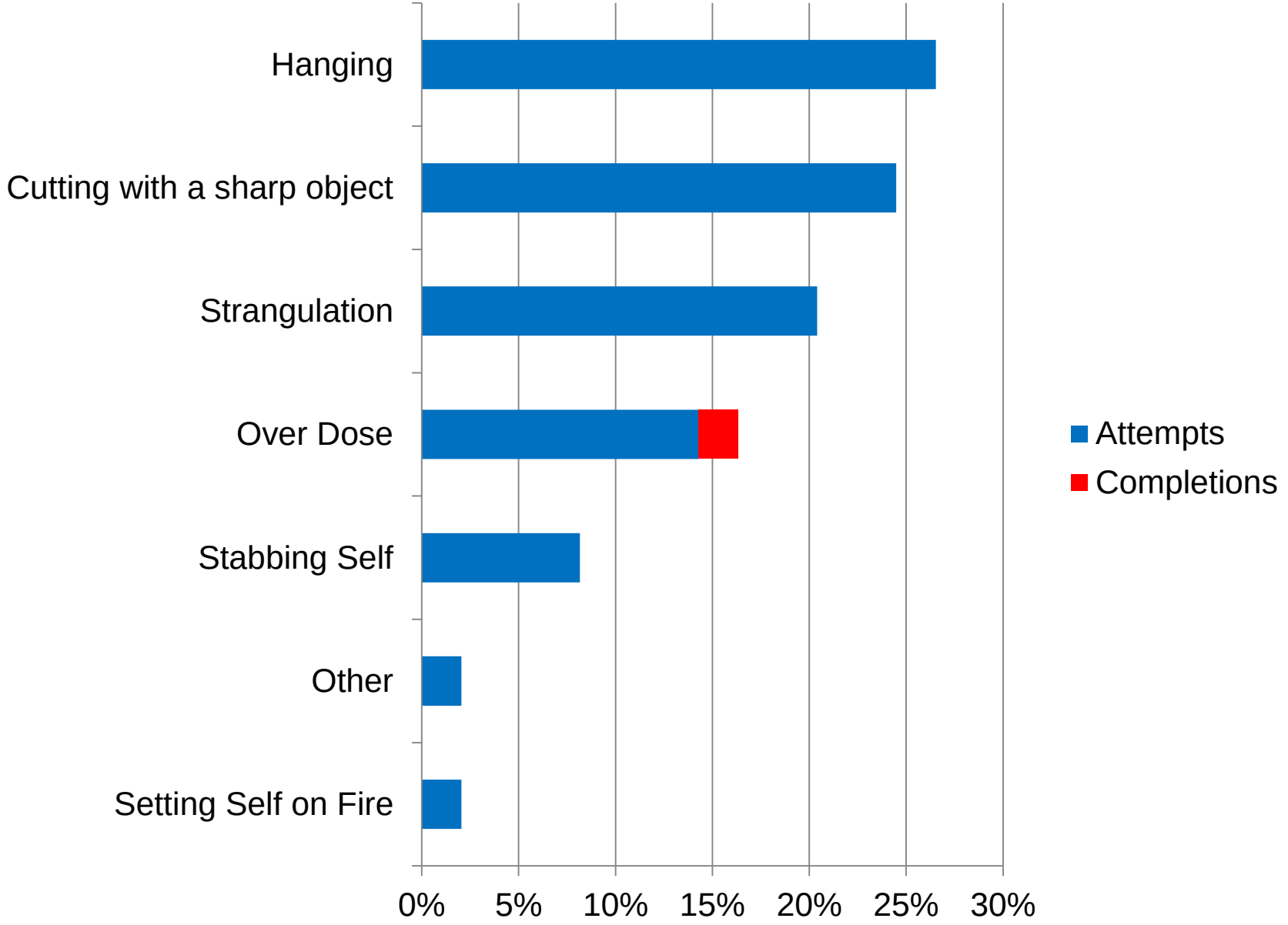
New products

Conclusions

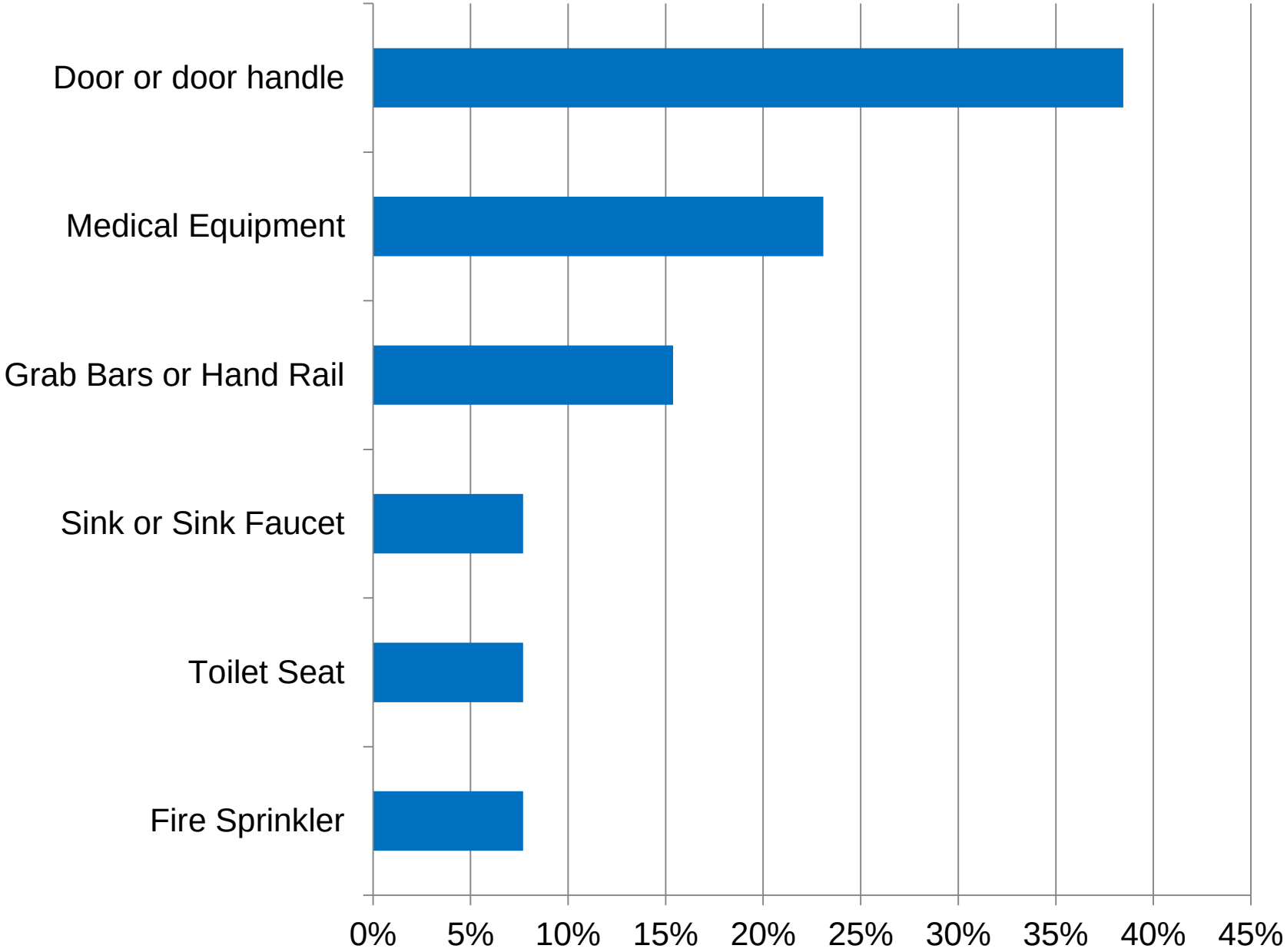
- Inpatient suicide on psychiatry units in VA continues to be extremely rare – approximately 0.5 completed suicides for every 100,000 psychiatric admissions.
- Hanging continues to be the most common method for inpatient suicide and doors, especially interior doors, are the most common anchor points.
- Sheets and bedding continue to be the most common type of lanyard for hanging.
- The environment of care, and access to contraband are primary root causes.

Suicide Attempts and Completions in the ED

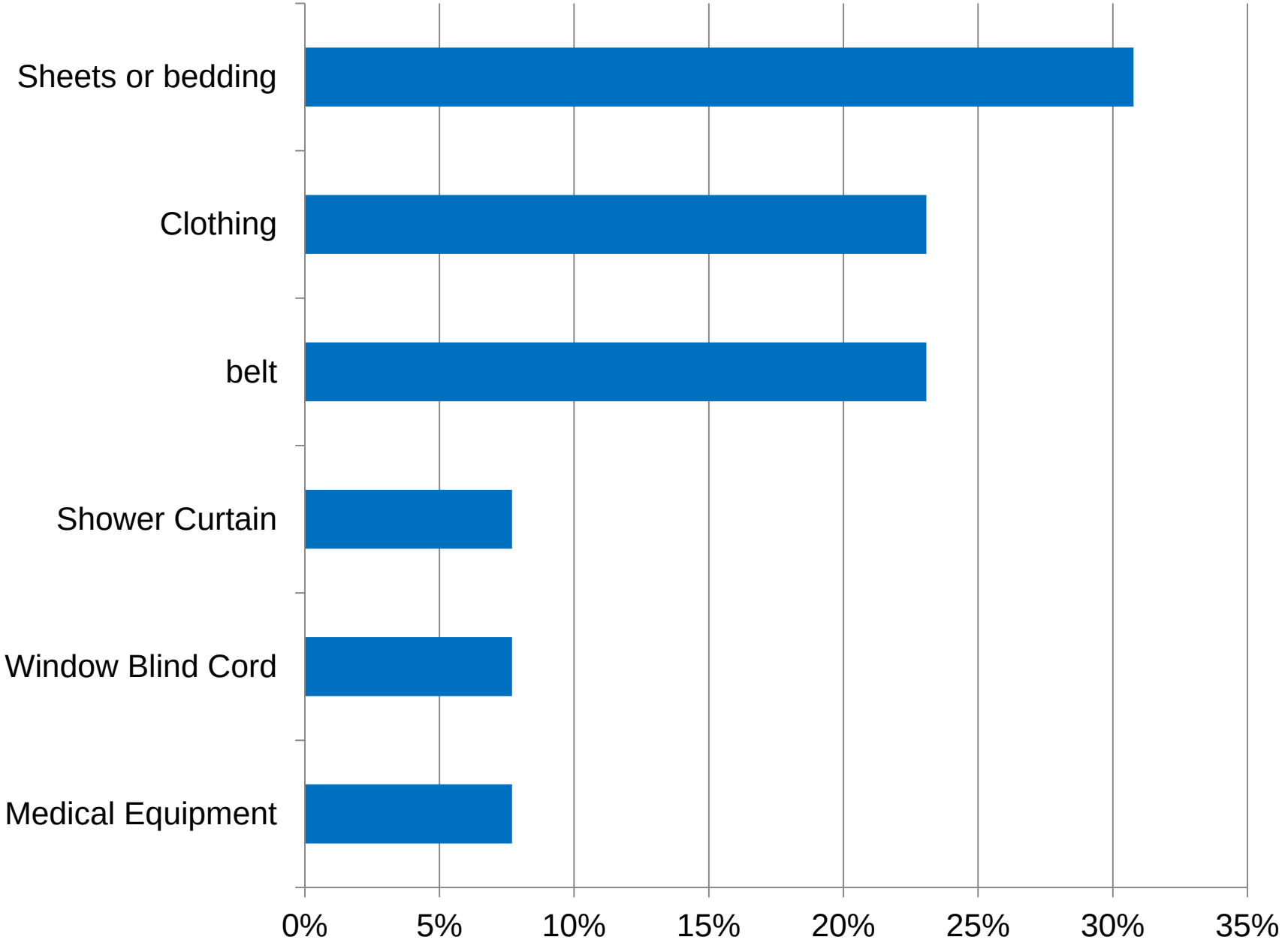
Method of suicide attempts and completions in the Emergency Department through 2011 (N=49)



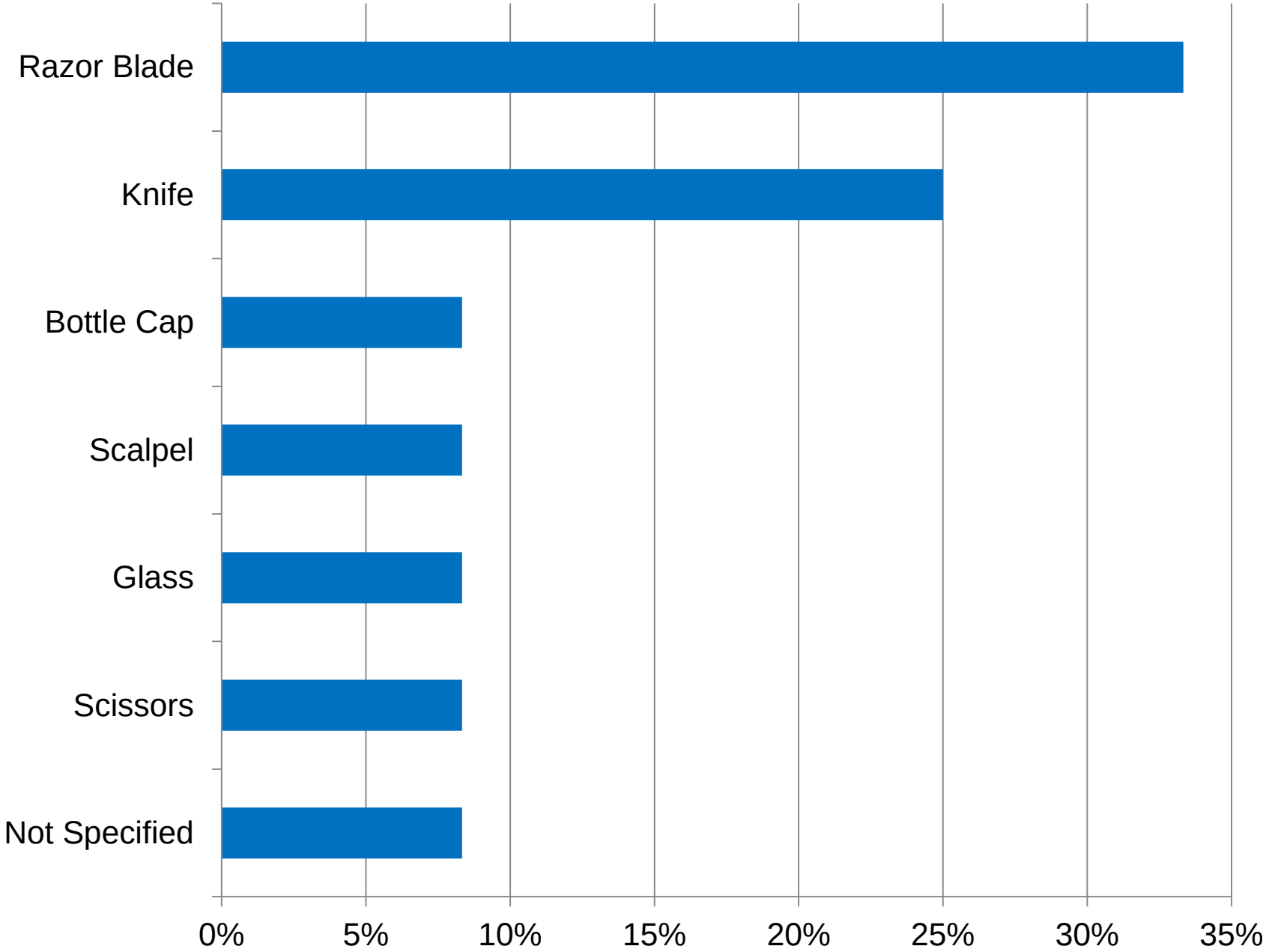
Anchor points for hanging in the ED through 2011 (N=13)



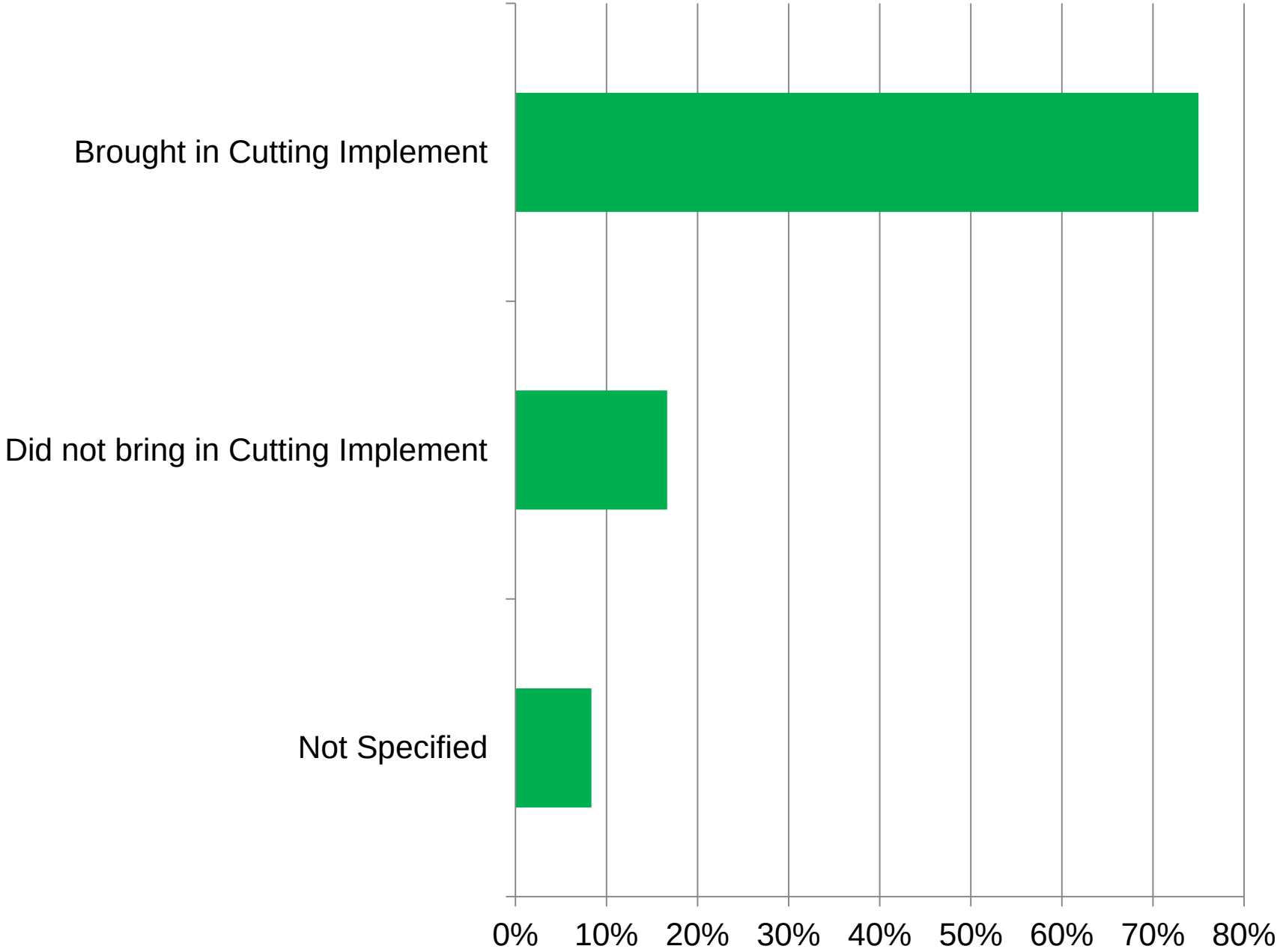
Lanyards used for handing in the ED through 2011 (N=13)



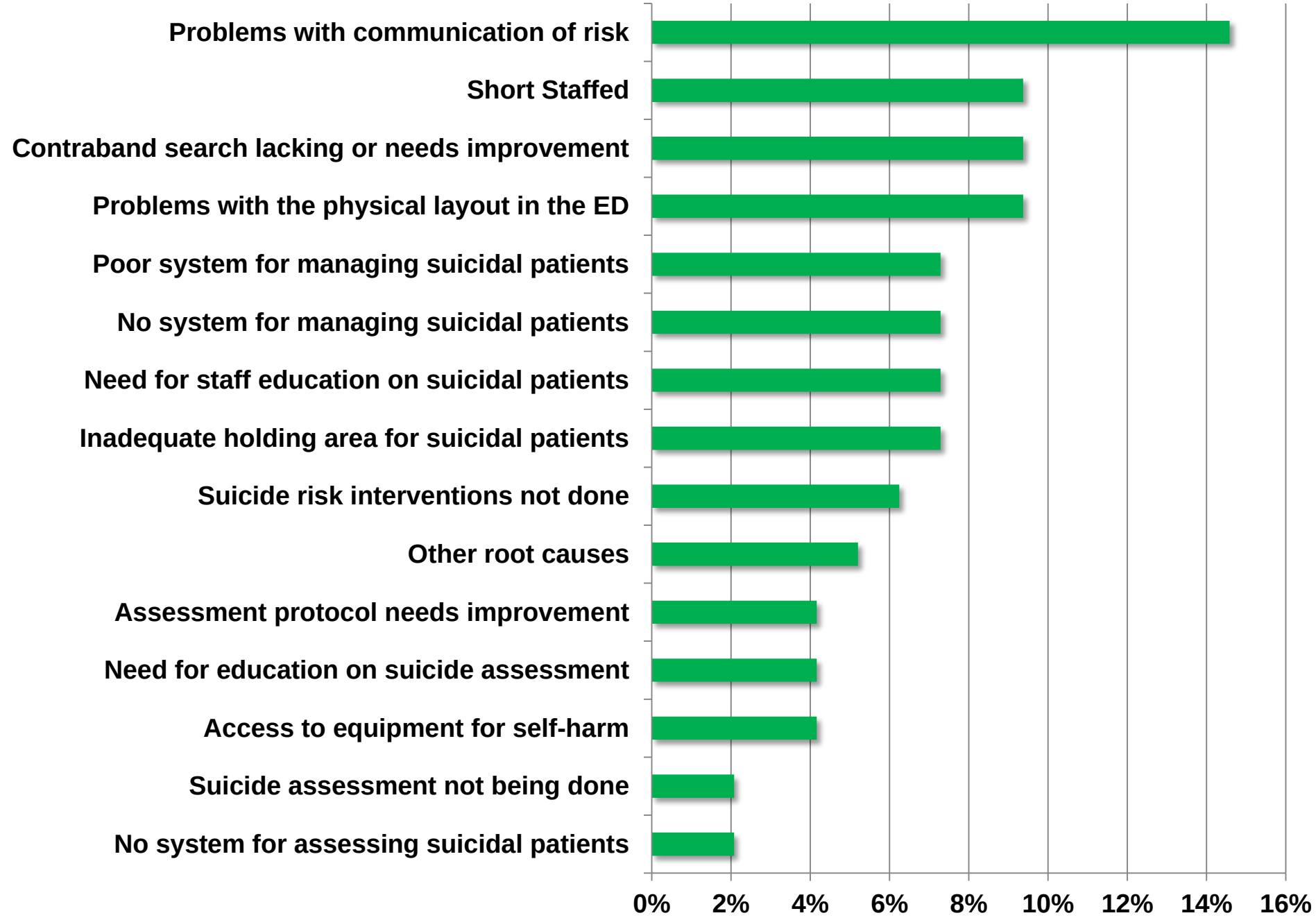
Method of cutting in the ED through 2011 (N=12)



Patients that brought cutting instrument into the ED (N=12)



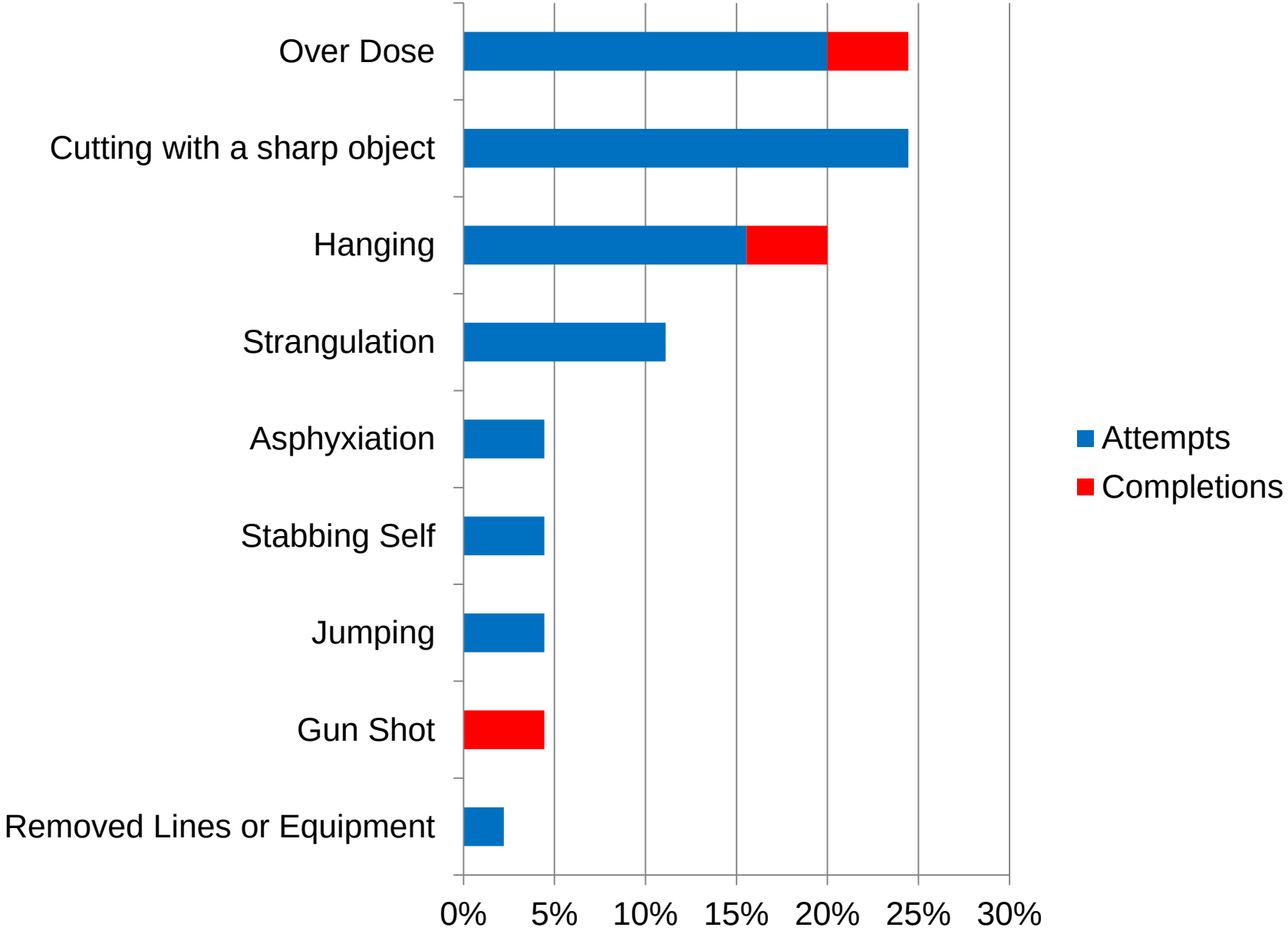
Root Causes for suicide attempts and completions in the ED (N=96)

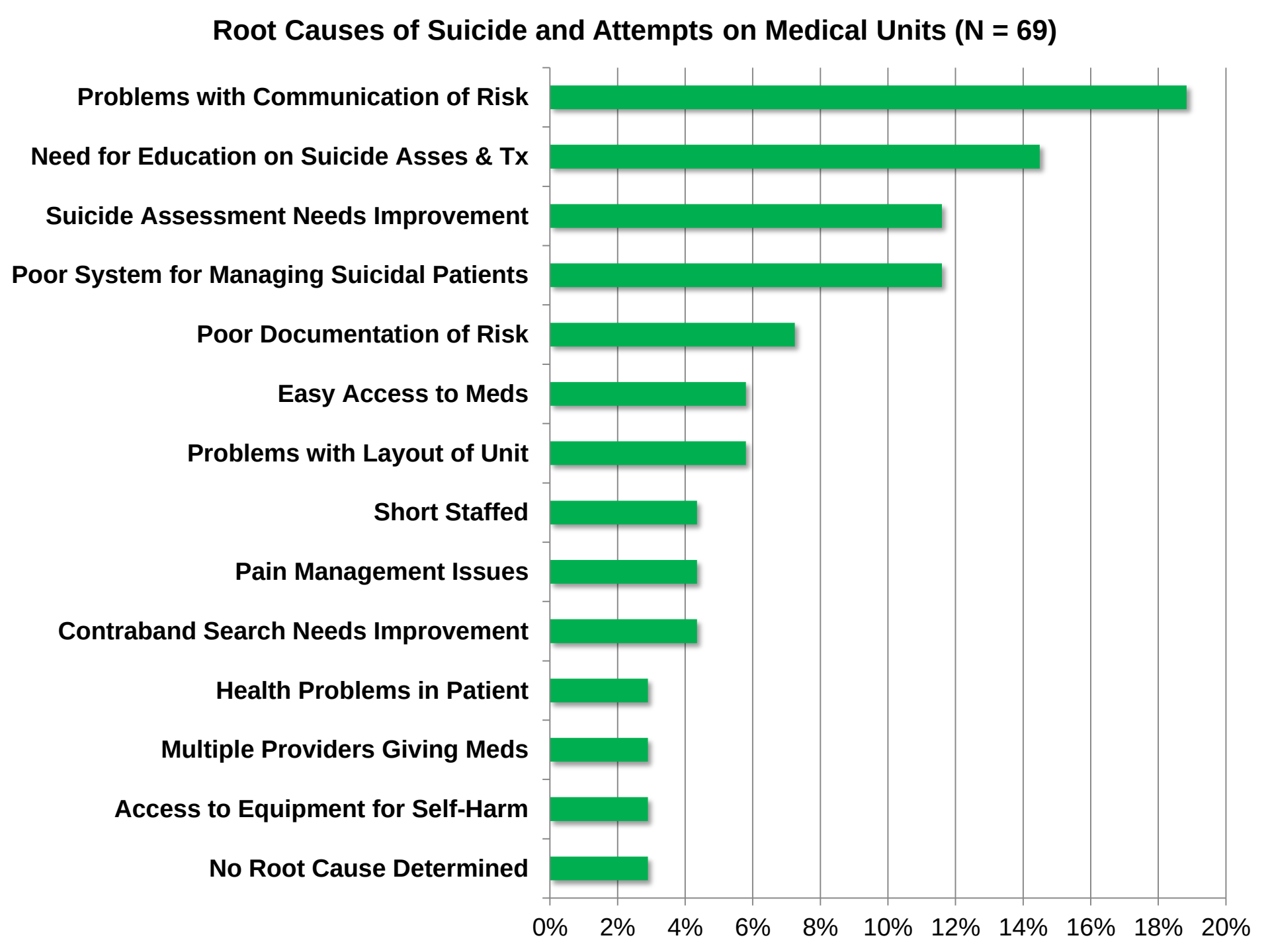


Recommendations for ED

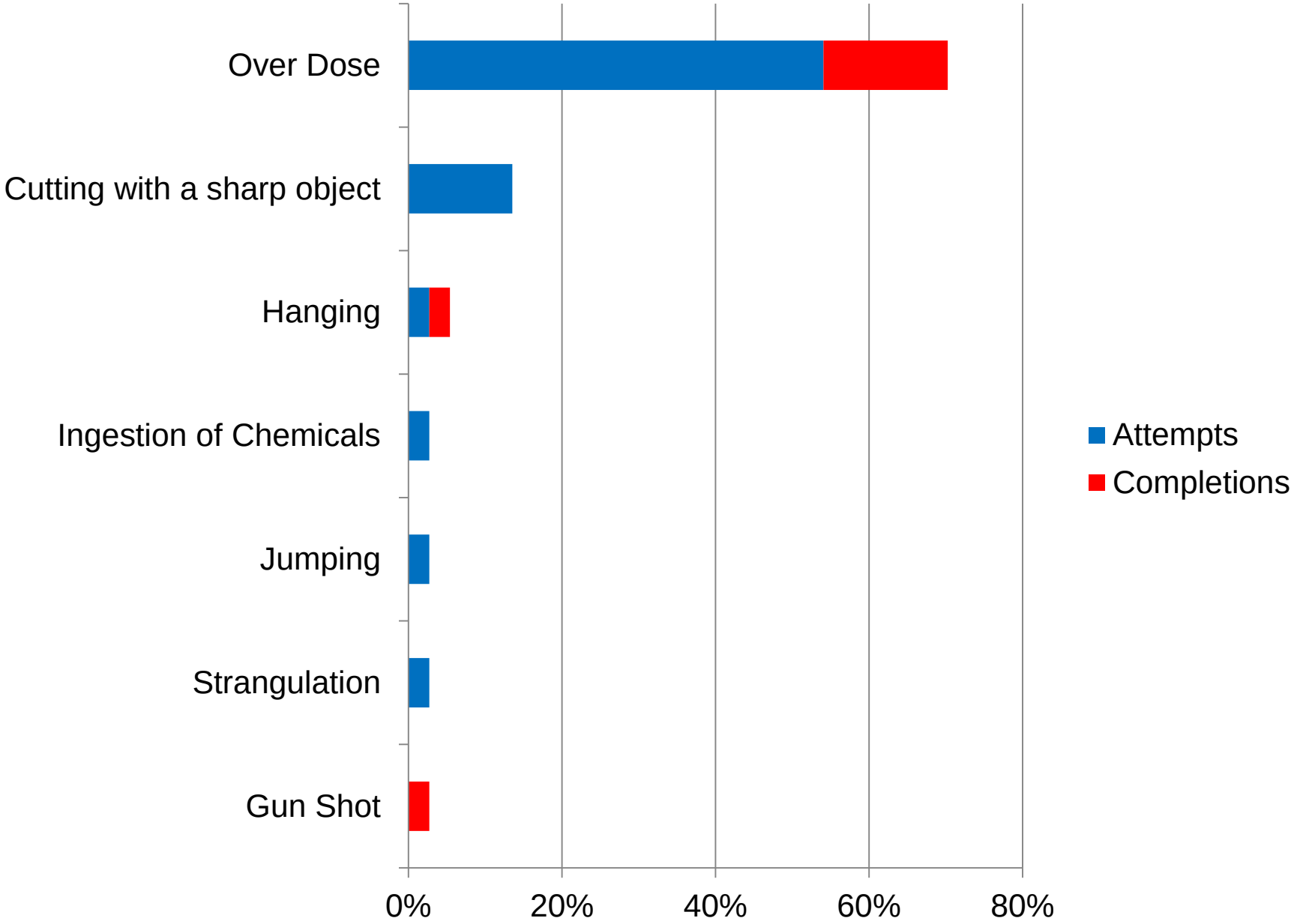
- Use a systematic protocol and checklist to periodically review mental health holding areas in the ED for suicidal hazards.
- Develop and implement specialized protocols for suicidal patients that include continuous observation where possible.
- Conduct thorough contraband searches with suicidal patients.
- Designate specialized holding areas, when practically possible, for suicidal patients that

Method of suicide attempts and completions in Acute Care Units through 2011 (N=45)

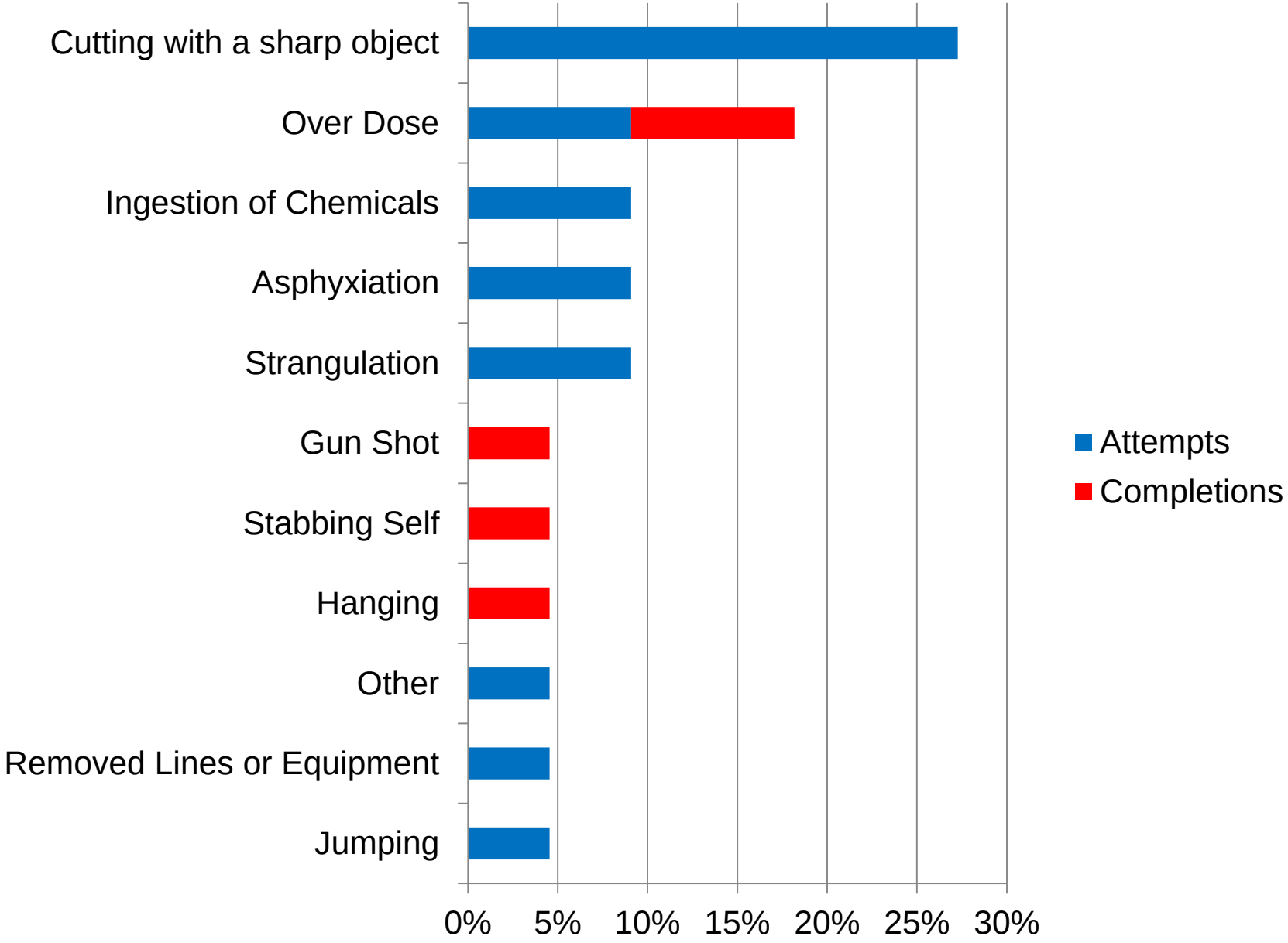



Root Causes of Suicide and Attempts on Medical Units (N = 69)
Problems with Communication of Risk
Need for Education on Suicide Asses & Tx
Suicide Assessment Needs Improvement
Poor System for Managing Suicidal Patients
Poor Documentation of Risk
Easy Access to Meds
Problems with Layout of Unit
Short Staffed
Pain Management Issues
Contraband Search Needs Improvement
Health Problems in Patient
Multiple Providers Giving Meds
Access to Equipment for Self-Harm
No Root Cause Determined
0%
2%
4%
6%
8%
10%
12%
14%
16%
18%
20%

Method of suicide attempts and completions in the Domiciliary through 2011 (N=37)



Method of suicide attempts and completions in Nursing Homes through 2011 (N=22)



Recommendations for Elderly Veterans

Screen elderly patients for depression and suicidal ideation in the inpatient settings.

Work with elderly patients faced with new and potentially demoralizing life stressors to find solutions to these problems and emotional support to manage. Particularly targeting those elderly patients about to be discharged from inpatient units.

Increase awareness and educate medical staff about the risk factors and prevalence of suicide, especially in elderly men and provide clear guidelines for the assessment and treatment of depression.

The Mental Health Environment of Care Checklist for Mental Health Units

Develop a checklist of potential hazards and suggested solutions/best practices

Develop a protocol for use

27.a. Are closets free of clothes rods that could be used as an anchor point for hanging? **----------** **27.b. Are closets free of clothes hangers (plastic, wood, and metal)?**	***Spring-loaded hooks designed for mental health areas should be used in lieu of closet rods and hangers.***
28.a. Are shelves in closets secured with tamper resistant fasteners and designed so they cannot be used as an anchor for hanging? **----------** **28.b. Are heavy items on shelves placed low to the floor and secured in place to prevent them from being removed?** **----------** **28.c. Is each shelf layer secured and not removable so that it cannot be pulled apart to be used as a weapon?**	***If there is a television or other electrical or heavy item on the shelf, it should be secured so that it cannot be pulled off onto someone, and the electrical cord must be short and plugged directly into the electrical receptacle. Sets of shelves should be short or low in height (low profile) to prevent the patient from reaching the ceiling.***

Protocol for Environmental Rounds

Form multidisciplinary safety inspection team

- **Include people who are not normally on the unit**

Conduct environmental rounds at least quarterly

Rate identified safety concerns using a standardized scale taking severity and frequency into account.

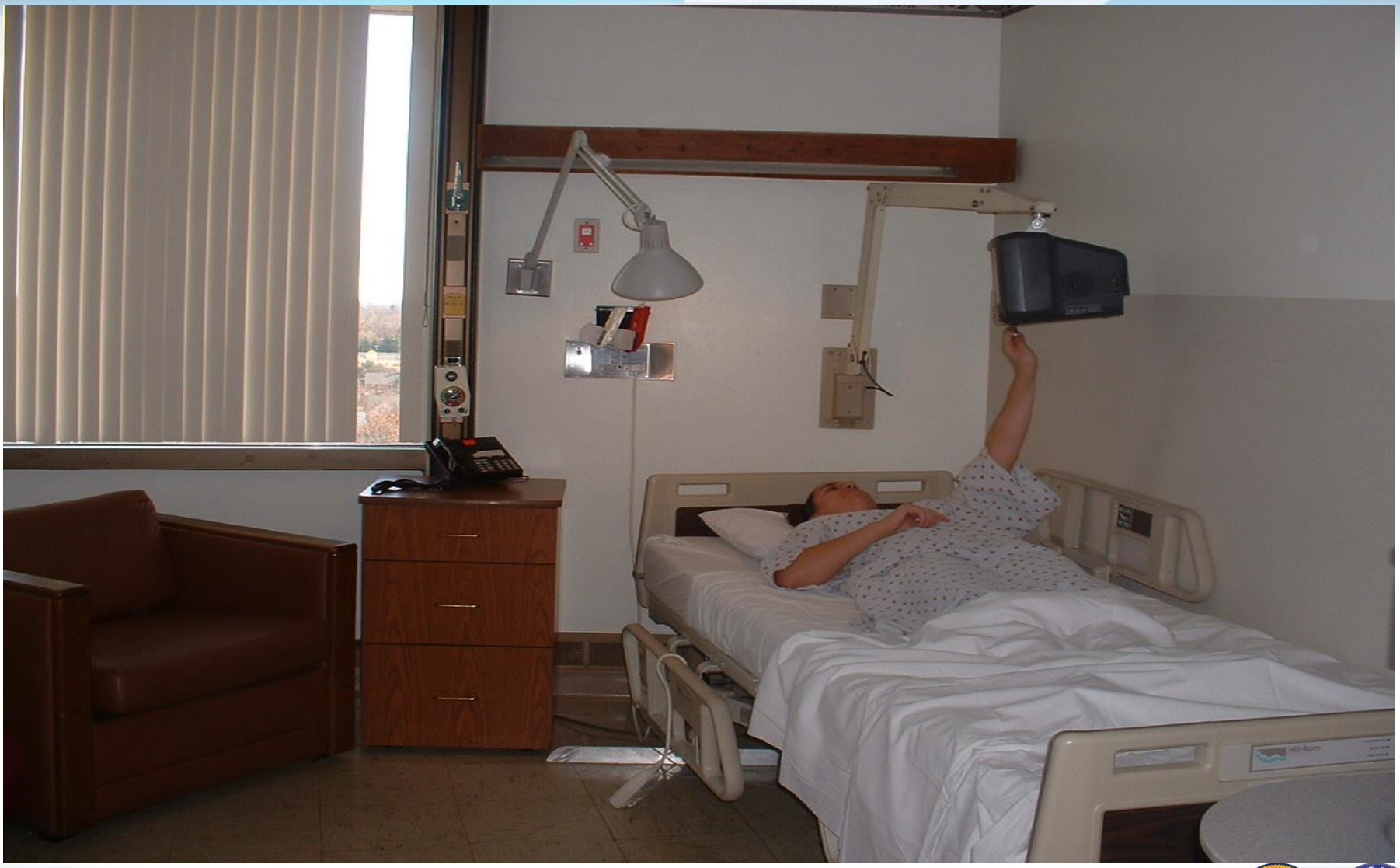
Track progress and report to senior leadership

First tracking sheet was due October 2007

Risk Level Classification Chart

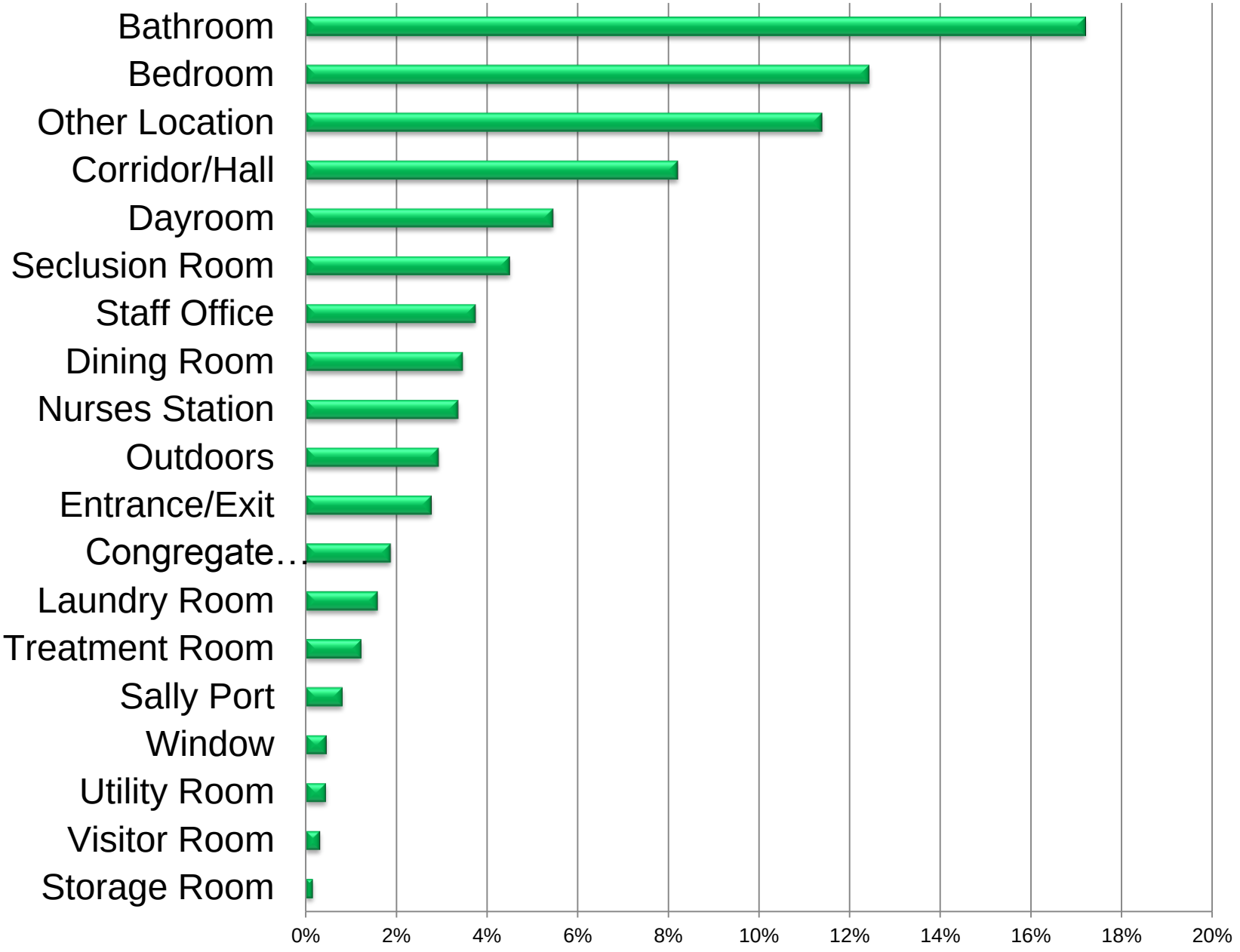
Risk Level Classification Chart				
Mishap Probability	Frequent	Occasional	Infrequent	**Very Rare**
Hazard Severity				
Death	5	5	4	3
Serious injury	5	4	4	3
Injury	3	2	2	1
Injury Unlikely	2	2	1	1

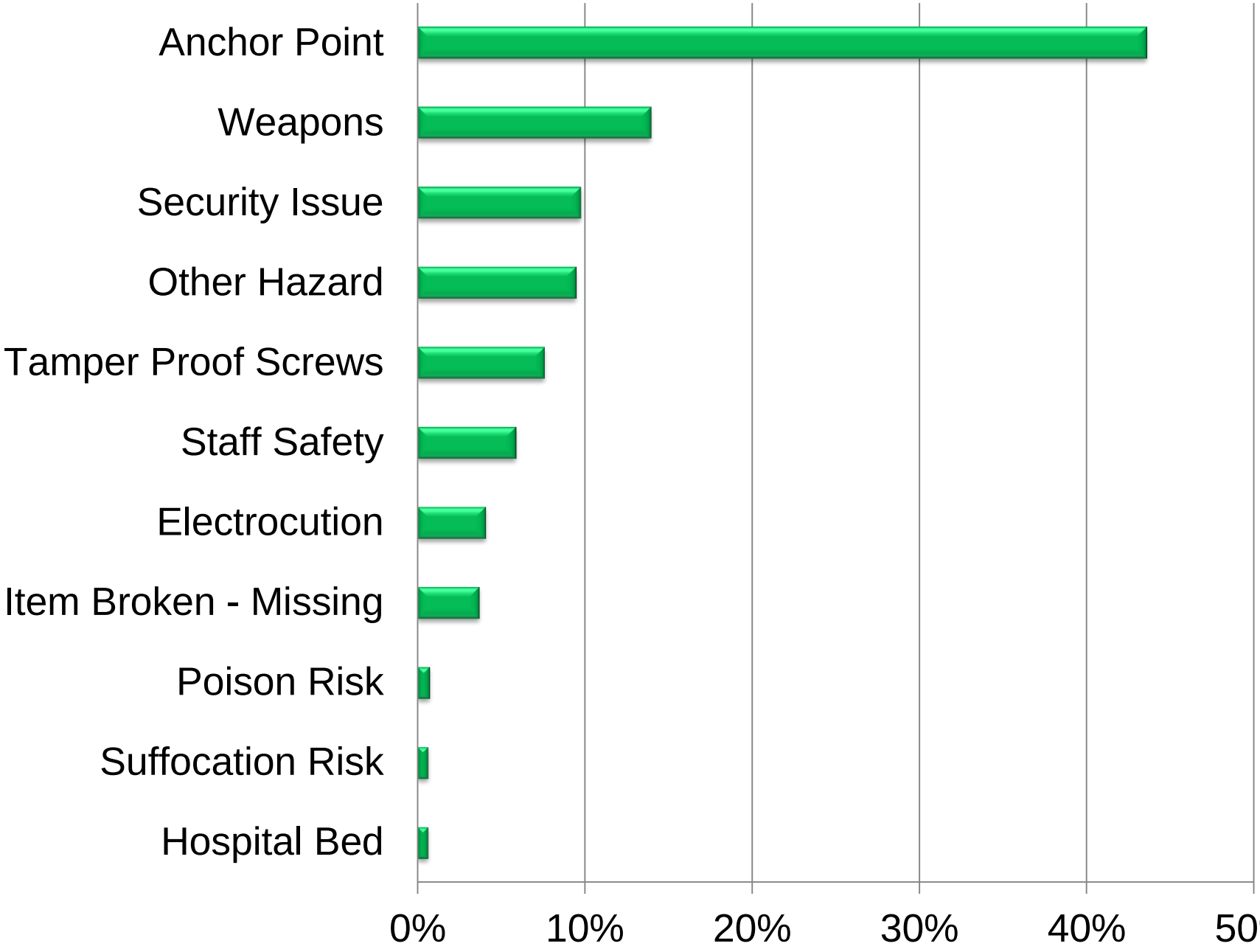
Exercise – Identify the hazards



The first 12 months of the Mental Health Environment of Care Checklist

- 113 VA facilities used the checklist to evaluate their mental health units.
- These facilities identified and rated 7642 hazards.
- At the end of the first year of the project, 5834 (76.3%) of these hazards had been abated.
- The next 2 slides show where the hazards were identified and what type of hazards were the most common – these have remained the same through 2011.


Bathroom
Bedroom
Other Location
Corridor/Hall
Dayroom
Seclusion Room
Staff Office
Dining Room
Nurses Station
Outdoors
Entrance/Exit
Congregate…
Laundry Room
Treatment Room
Sally Port
Window
Utility Room
Visitor Room
Storage Room
0%
2%
4%
6%
8%
10%
12%
14%
16%
18%
20%


Anchor Point
Weapons
Security Issue
Other Hazard
Tamper Proof Screws
Staff Safety
Electrocution
Item Broken - Missing
Poison Risk
Suffocation Risk
Hospital Bed
0%
10%
20%
30%
40%
50%

Significant Hazards - 2011

Most "Serious" Hazard Type

- Anchor Points
- Suffocation Risk
- Poison Risk

Most "Serious" Location

- Bedrooms had the highest risk level
- Bathrooms
- Congregate Bathrooms

End of FY 2011

- By 2009 facilities had identified 9786 hazards - 2144 new hazards were identified – and abated 8298 (84.8%)
- By end of FY11 12,035 total hazards and 89.3% (10,753) had been abated
- As the more obvious hazards are identified and abated the staff begins to recognize more subtle hazards

Hazards Indentified by Risk Level - 2011

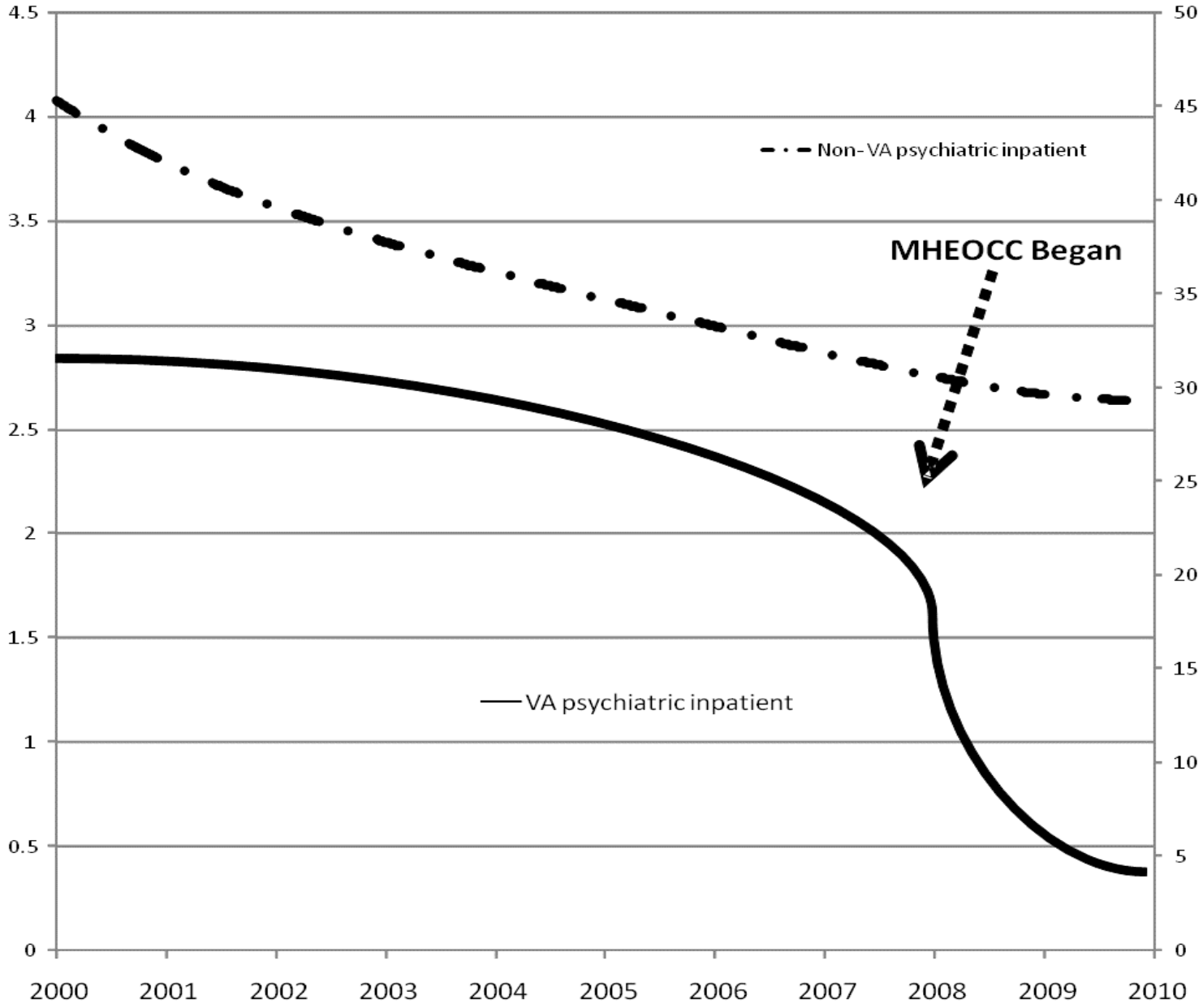
Risk Level	Not Complete	Complete	Total
1	253	2447	2700
2	458	2958	3416
3	246	2313	2559
4	305	2827	3132
5	**20**	**208**	**228**
Grand Total	**1282**	**10753**	**12035**

Comparing the Proportion of Quarters in which Suicides Occurred Before and After MHEOCC Implementation.

2-sided Fisher's exact P = 0.004.

	Pre MHEOCC	Post MHEOCC	Total
Quarters with suicides	22	3	25
Quarters without suicides	10	11	19
Total	32	14	46
% quarters with suicides	69%	21%	54%

Rate of Suicides (per 100,000 admissions) By Year



Reducing Environmental Risk Factors: What's in the literature?

Eliminate structures that are capable of supporting a hanging object

- Plumbing, ductwork, fire sprinkler heads, curtain or clothing rods, hooks, shower heads and controls, doors, hinges, door handles, light fixtures

Include structures close to the floor

- Towel bars, grab bars, toilet/sink plumbing & faucets, projections and side-rails on beds

Reduce strangulation devices

- Drapery cords, belts, shoe laces, ties, kerchiefs, bathrobe sashes, drawstring pants, coat hangers, call cords, privacy curtains, trash can liners. Very hard to eliminate all of these e.g. sheets.

Reducing Environmental Risk Factors: What's in the literature?

Reduce access to dangerous objects

- Contraband check, medications, objects provided by roommates and visitors, cleaning supplies, electrical outlets, stoves, breakable furniture

Reduce access to sharps

- Any breakable glass or tiles, razors, flatware, light bulbs, wires or springs, dishes, scissors

Reduce opportunities to jump

- Windows, balconies, walkways, roofs

Conversation with JC

The Joint Commission does not endorse or recommend a specific suicide/violence risk assessment tool.

A good risk reduction process:

- Clinical assessment and reassessment
- Environmental evaluation
- Staff communication and participation.

Conversation with JC – Assessment

Clinical assessment and reassessment remains the single best method for identifying individuals at risk for hurting themselves or others

Reassessments should be conducted at critical stages of treatment

- change in privilege level
- change in affective state
- prior to gaining pass
- transfers between units
- prior to discharge

The combination of clinical interview with an assessment tool maximizes the risk reduction efforts and allows staff the opportunity to validate previously held understandings of the patient

Conversation with JC Environmental Evaluation

Reduce the opportunities for self harm or harm to others that exist in the immediate hospital environment

Remove to the extent possible all opportunities for hanging and strangulation.

- Any object that protrudes from the wall and can support as little as 5-10 pounds presents an opportunity for strangulation.

If rooms that have risk opportunities must be used for psychiatric patients, then the on-going screening/assessment and observation process must be maximized to the greatest extent possible.

Conversation with JC – Staff Communication and Participation

Suicide prevention on an in-patient unit needs to be an all staff/all shift effort 24/7

Involvement of all staff takes the risk assessment decision out of the hands of a few and place it on the shoulders of the entire staff

Two critical communication "hand-off" points exist

- Nursing shift change
- Physician to physician hand-off

Most hospital suicides occur on the 2nd and 3rd shift so this staff must be actively involved in risk assessment

Conclusions

- Inpatient suicide on psychiatry units in VA continues to be extremely rare – approximately 0.5 completed suicides for every 100,000 psychiatric admissions.
- Hanging continues to be the most commonly reported method for inpatient suicide, although reports of Overdose and Cutting are more prevalent on medical units, domiciliaries and nursing home care units.
- Doors, especially interior doors, are the most common anchor points.
- Sheets and bedding continue to be the most common type of lanyard for hanging.
- Be vigilant about the environment of care, contraband and good communication of risk.

Questions?

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Resources

VA Mental Health EOC Checklist:
http://vaww.ncps.med.va.gov/Guidelines/mheocc/MHEOCC.xls

VA National Center for Patient Safety Patient Safety Assessment Tool
http://www.patientsafety.gov/SafetyTopics.html#PSAT

Summary of the VA Task force on Suicide Prevention:
http://vaww.ncps.med.va.gov/Publications/TIPS/Docs/TIPS_MarApr04.pdf#pages=1

OIG Report on VA Suicide Prevention:
http://www.va.gov/oig/54/reports/VAOIG-06-03706-126.pdf

NAPHS Guidelines for the Built Environment of Behavioral Health Facilitieshttp://www.naphs.org/Teleconference/documents/DesignGuide3.0FINALSpring2009.pdf

JCAHO Environment of Care Handbook, Sixth Edition. 2006. http://www.jcrinc.com/publications.asp?durki=10956

VA Expert on Suicide Prevention: Jan.Kemp@va.gov

VA Expert on safe furniture: Patricia.Palmer@va.gov

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